

6/3/05 10/091,447

of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 11:20:35 ON 03 JUN 2005

=> fil reg

COST IN U.S. DOLLARS

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 11:20:44 ON 03 JUN 2005

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STRUCTURE FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

DICTIONARY FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

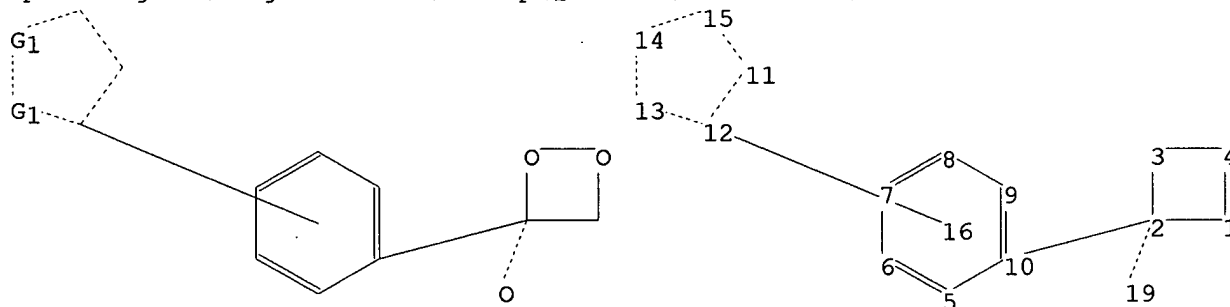
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\New Folder\10091447a.str



```

chain nodes :
19
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
chain bonds :
2-10 2-19
ring bonds :
1-2 1-4 2-3 3-4 5-6 5-10 6-7 7-8 8-9 9-10 11-12 11-15 12-13 13-14
14-15
exact/norm bonds :
1-2 1-4 2-3 2-10 2-19 3-4 11-12 11-15 12-13 13-14 14-15
normalized bonds :
5-6 5-10 6-7 7-8 8-9 9-10

```

G1:O,S,N

```

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:CLASS 19:CLASS

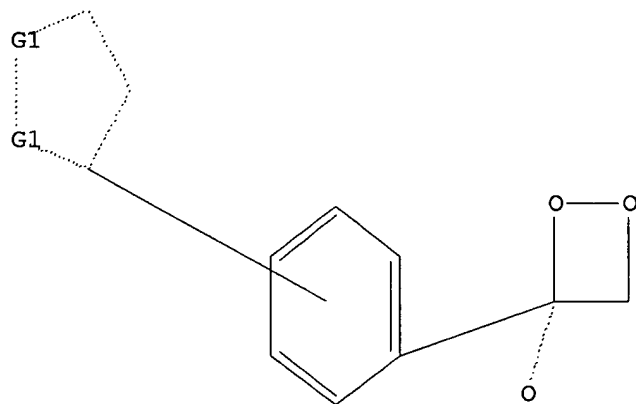
```

L1 STRUCTURE UPLOADED

```

=> d
L1 HAS NO ANSWERS
L1 STR

```



G1 O,S,N

Structure attributes must be viewed using STN Express query preparation.

```

=> s L1
SAMPLE SEARCH INITIATED 11:21:03 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 8 TO ITERATE

```

```

100.0% PROCESSED      8 ITERATIONS      0 ANSWERS
SEARCH TIME: 00.00.01

```

```

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   8 TO      329
PROJECTED ANSWERS:      0 TO      0

```

L2 0 SEA SSS SAM L1

=> s L1 full

FULL SEARCH INITIATED 11:21:10 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 66 TO ITERATE

100.0% PROCESSED 66 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=> fil beilstein

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	161.33	161.54

FILE 'BEILSTEIN' ENTERED AT 11:21:25 ON 03 JUN 2005
COPYRIGHT (c) 2005 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften
licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE RELOADED ON OCTOBER 20, 2002
FILE LAST UPDATED ON APRIL 21, 2005

FILE COVERS 1771 TO 2004.
*** FILE CONTAINS 9,218,366 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in
separate documents and can not be searched together in one query.
Reaction data for BEILSTEIN compounds may be displayed
immediately with the display codes PRE (preparations) and REA
(reactions). A substance answer set retrieved after the search
for a chemical name, a compounds with available reaction
information by combining with PRE/FA, REA/FA or more generally
with RX/FA. The BEILSTEIN Registry Number (BRN) is the link
between a BEILSTEIN compound and belonging reactions. For mo
detailed reaction searches BRNs can be searched as reaction
partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *

NEW

* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE
SEARCHED, SELECTED AND TRANSFERRED.
* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES,
ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A
COMPOUND AT A GLANCE.

=> s L1 full

FULL SEARCH INITIATED 11:21:32 FILE 'BEILSTEIN'
FULL SCREEN SEARCH COMPLETED - 3 TO ITERATE

100.0% PROCESSED 3 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.05

L4 0 SEA SSS FUL L1

=> fil caold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.06

161.60

FILE 'CAOLD' ENTERED AT 11:21:59 ON 03 JUN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s L1 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 11:22:04 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 66 TO ITERATE

100.0% PROCESSED 66 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L5 0 SEA SSS FUL L1

L6 0 L5

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.43

323.79

FILE 'REGISTRY' ENTERED AT 11:22:10 ON 03 JUN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

DICTIONARY FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now      *
* available and contains the CA role and document type information.  *
*
*****
```

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> fil reg
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                ENTRY      SESSION
FULL ESTIMATED COST                               0.86      324.65
```

FILE 'REGISTRY' ENTERED AT 11:23:39 ON 03 JUN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3
DICTIONARY FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

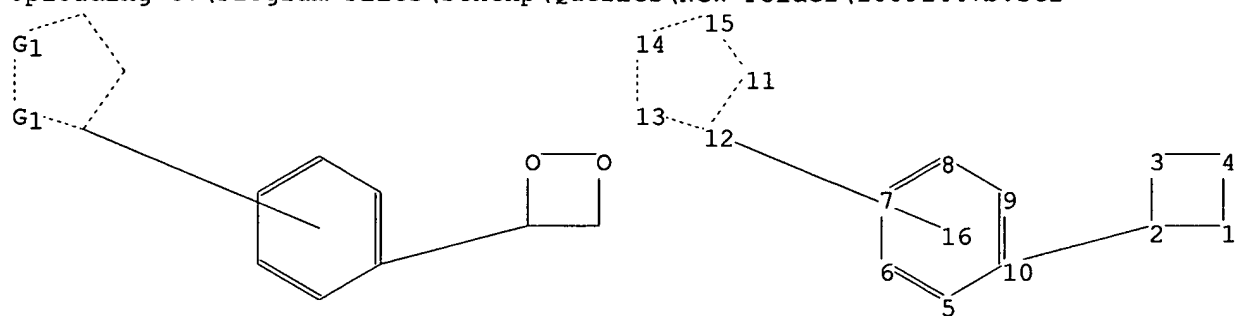
```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now      *
* available and contains the CA role and document type information.  *
*
*****
```

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\New Folder\10091447b.str



ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

chain bonds :

2-10

ring bonds :

1-2 1-4 2-3 3-4 5-6 5-10 6-7 7-8 8-9 9-10 11-12 11-15 12-13 13-14 14-15

exact/norm bonds :

1-2 1-4 2-3 2-10 3-4 11-12 11-15 12-13 13-14 14-15

normalized bonds :

5-6 5-10 6-7 7-8 8-9 9-10

G1:O,S,N

Match level :

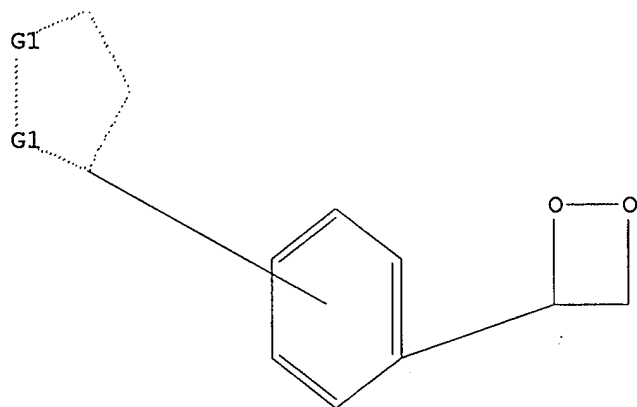
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:CLASS

L7 STRUCTURE UPLOADED

=> d

L7 HAS NO ANSWERS

L7 STR



G1 O,S,N

Structure attributes must be viewed using STN Express query preparation.

=> s L7

SAMPLE SEARCH INITIATED 11:24:21 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 36 TO ITERATE

100.0% PROCESSED 36 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 360 TO 1080

PROJECTED ANSWERS: 1 TO 80

L8 1 SEA SSS SAM L7

=> s L7 full

FULL SEARCH INITIATED 11:24:37 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 680 TO ITERATE

100.0% PROCESSED 680 ITERATIONS

6 ANSWERS

SEARCH TIME: 00.00.01

L9 6 SEA SSS FUL L7

=> d L9

L9 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN

RN 746599-91-7 REGISTRY

ED Entered STN: 17 Sep 2004

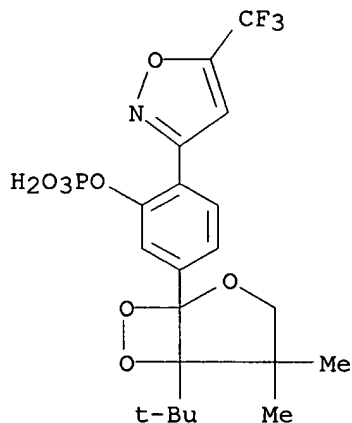
CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]-, dihydrogen phosphate (ester) (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C20 H23 F3 N O8 P

CI COM

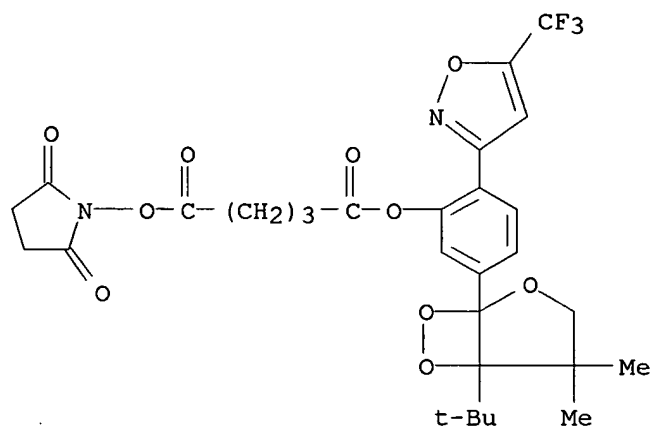
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

=> d L9 2-6

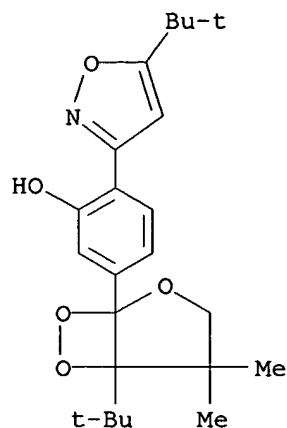
L9 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 594860-03-4 REGISTRY
 ED Entered STN: 29 Sep 2003
 CN Pentanoic acid, 5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxo-,
 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-
 2-[5-(trifluoromethyl)-3-isoxazolyl]phenyl ester (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C29 H31 F3 N2 O10
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

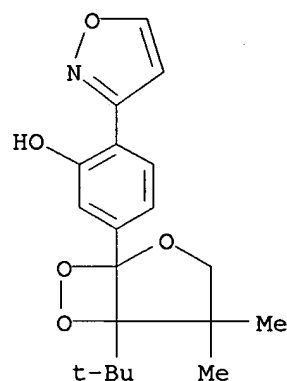
L9 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 502423-50-9 REGISTRY
 ED Entered STN: 09 Apr 2003
 CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-
 trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(1,1-dimethylethyl)-3-isoxazolyl]-
 (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C23 H31 N O5
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN
RN 502423-49-6 REGISTRY
ED Entered STN: 09 Apr 2003
CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-(3-isoxazolyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C19 H23 N O5
SR CA
LC STN Files: CA, CAPLUS, CASREACT

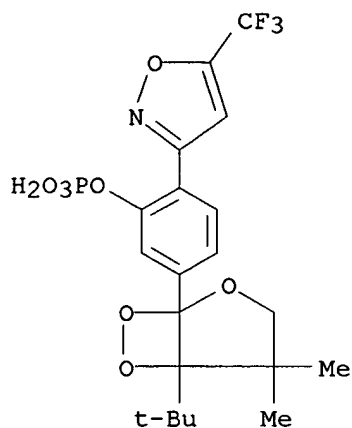


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN
RN 457898-62-3 REGISTRY
ED Entered STN: 02 Oct 2002
CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]-, dihydrogen phosphate (ester), disodium salt (9CI) (CA INDEX NAME)
MF C20 H23 F3 N O8 P . 2 Na

SR CA
LC STN Files: CA, CAPLUS, USPATFULL
CRN (746599-91-7)

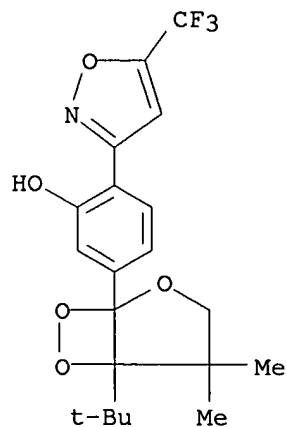


●2 Na

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN
RN 457898-58-7 REGISTRY
ED Entered STN: 02 Oct 2002
CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]- (9CI)
(CA INDEX NAME)
FS 3D CONCORD
MF C20 H22 F3 N O5
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

172.80

497.45

FILE 'CAPLUS' ENTERED AT 11:25:05 ON 03 JUN 2005

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FILE COVERS 1907 - 3 Jun 2005 VOL 142 ISS 24

FILE LAST UPDATED: 2 Jun 2005 (20050602/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s L9

L10 3 L9

=> d ibib abs hitstr 1-3

L10 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:717202 CAPLUS

DOCUMENT NUMBER: 139:230758

TITLE: 1,2-Dioxetane derivatives and chemiluminescent reagents employing them

INVENTOR(S): Matsumoto, Masakatsu; Watanabe, Nobuko; Yamada, Masashi

PATENT ASSIGNEE(S): Tosoh Corporation, Japan

SOURCE: Eur. Pat. Appl., 32 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342724	A1	20030910	EP 2003-4897	20030306
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004002300	A2	20040108	JP 2003-16454	20030124
US 2003207329	A1	20031106	US 2003-382853	20030307

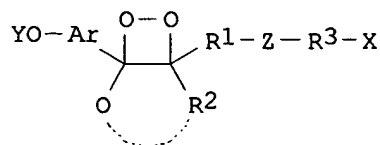
US 6747160	B2	20040608		
US 2004176611	A1	20040909	US 2004-798338	20040312
US 6844453	B2	20050118		

PRIORITY APPLN. INFO.:

	JP 2002-64040	A	20020308
	JP 2002-88380	A	20020327
	US 2003-382853	A3	20030307

OTHER SOURCE(S): MARPAT 139:230758

GI



AB The patent relates to the preparation of A 1,2-dioxetane derivative of the formula

(I): wherein Ar is an aryl group which may have an alkyl group, an aryl group, a halogen atom, an alkoxy group, a carboxyl group, a formyl group, an alkyl ester, an aryl ester, an alkylketone, an arylketone or a hetero ring bonded thereto, X is a substituent capable of labeling an organic compound or a biol. mol., or an ester, Y is a hydrogen atom, an acyl group or a group of the formula -Si(R4R5R6) (wherein each of R4, R5 and R6 which are independent of one another, is an alkyl group or an aryl group), Z is an alkyl group, an aryl group, an oxygen atom, a sulfur atom, a carbonyl group, -(CO)-O-, -O-(CO)-, -NH-, -NH-CO-, -CO-NH-, -OSi(R7R8)- (wherein each of R7 and R8 which are independent of each other, is an alkyl group or aryl group) or a group of the formula -(R9R10) SiO- (wherein each of R9 and R10 which are independent of each other, is an alkyl group or an aryl group), each of R1 and R2 is an alkyl group or an aryl group, and R3 is a spacer. Thus, 1,2-dioxetane derivative 5-(5-tert-butyl-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl)-2-(5-trifluoromethylisooxazol-3-yl)phenylsuccinimidyl glutarate prepared in a multi-step synthesis was used with a TSH antibody (TSH antibody) to make a chemiluminescent substrate-labeled TSH antibody which is stable during anal. and can be handled easily.

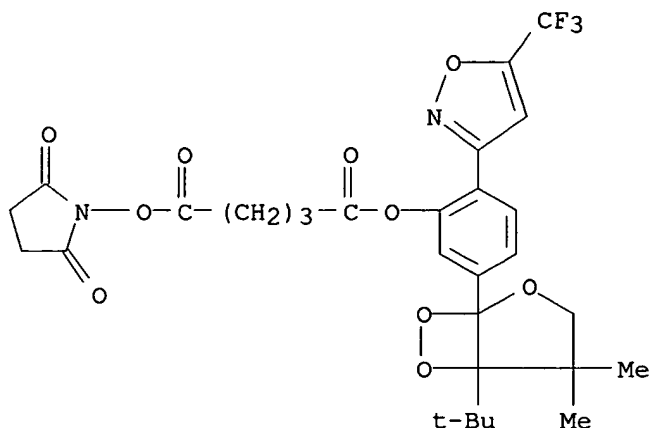
IT **594860-03-4P**

RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation of 1,2-dioxetane derivs. and chemiluminescent reagents thereof for immunoassay)

RN 594860-03-4 CAPLUS

CN Pentanoic acid, 5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxo-, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]phenyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:862396 CAPLUS

DOCUMENT NUMBER: 138:255129

TITLE: Synthesis of bicyclic dioxetanes bearing a 3-hydroxy-4-isoxazolylphenyl moiety: new CIEEL-active dioxetanes emitting light with remarkable high-efficiency in aqueous medium

AUTHOR(S): Matsumoto, Masakatsu; Sakuma, Toshimitsu; Watanabe, Nobuko

CORPORATE SOURCE: Department of Materials Science, Kanagawa University, Tsuchiya, Hiratsuka, Kanagawa, 259-1205, Japan

SOURCE: Tetrahedron Letters (2002), 43(49), 8955-8958
CODEN: TELEAY; ISSN: 0040-4039

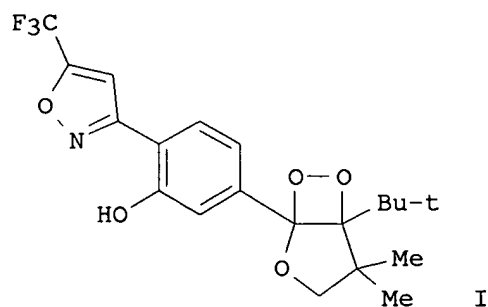
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:255129

GI



AB Bicyclic dioxetanes bearing a 3-hydroxy-4-isoxazolylphenyl moiety were synthesized. All these dioxetanes underwent base-induced CIEEL-decay to afford light with high efficiency in an NaOH/H₂O system as well as in a TBAF (tetrabutylammonium fluoride)/acetonitrile system. Among them, a dioxetane bearing a 3-hydroxy-4-[5-(trifluoromethyl)isoxazol-3-yl]phenyl moiety (I) emitted light in the aqueous system with the highest efficiency which parallels that attained in an aprotic solvent system. Fluorescence study and the AM1 calcns. for I and the parent CIEEL-active dioxetanes

suggested that one important factor affecting chemiluminescence efficiency in an aqueous system should be the hydrogen-bonding at the carbonyl oxygen site of an oxyanion of hydroxyarene-carboxylate as the emitter produced by the CIEEL-decay.

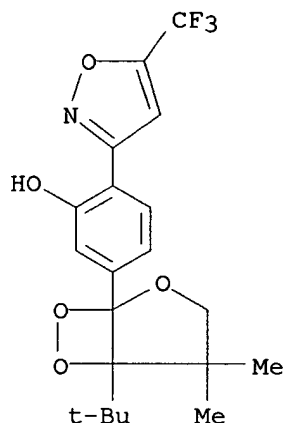
IT **457898-58-7P**

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and AM1 calcns. of CIEEL-active bicyclic dioxetanes bearing a hydroxyisoxazolylphenyl moiety)

RN 457898-58-7 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]- (9CI) (CA INDEX NAME)



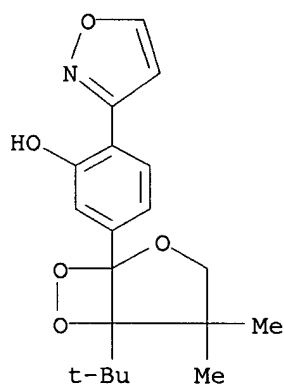
IT **502423-49-6P 502423-50-9P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis of CIEEL-active bicyclic dioxetanes bearing a

hydroxyisoxazolylphenyl moiety)

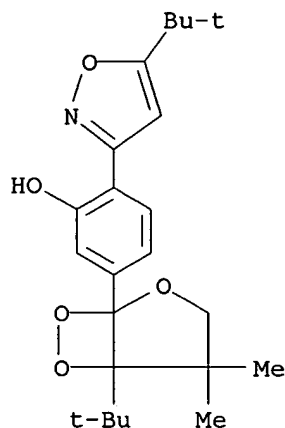
RN 502423-49-6 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-(3-isoxazolyl)- (9CI) (CA INDEX NAME)



RN 502423-50-9 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(1,1-dimethylethyl)-3-isoxazolyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:693160 CAPLUS

DOCUMENT NUMBER: 137:232640

TITLE: 1,2-dioxetane derivatives and their use as chemiluminescent reagents, luminescence methods and measuring methods

INVENTOR(S): Matsumoto, Masakatsu; Watanabe, Nobuko; Yamada, Masashi

PATENT ASSIGNEE(S): Tosoh Corporation, Japan

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

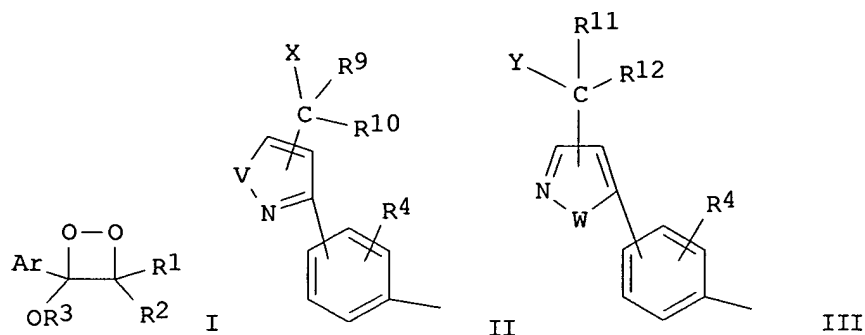
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1238976	A1	20020911	EP 2002-5225	20020307
EP 1238976	B1	20031008		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002338576	A2	20021127	JP 2002-57606	20020304
US 2002132365	A1	20020919	US 2002-91447	20020307
PRIORITY APPLN. INFO.:			JP 2001-65347	A 20010308
OTHER SOURCE(S):	MARPAT 137:232640			
GI				

this app-



AB 1,2-Dioxetane derivs. are described by the general formula I (R1 and R2 = independently selected H, alkyl or aryl, or R1 and R2 may together form a cyclic or polycyclic organic ring group spiro-bonded to the dioxetane ring; R3 = alkyl or aryl, or R3 and R1 or R2 may together form a condensed ring containing the dioxetane ring and a heteroatom; Ar = II or III; R4 = OH, alkoxy, aralkyloxy, -OSi(R5R6R7), phosphate, or -S(C:O)R8; R5, R6 and R7 = independently selected alkyl or aryl groups; R8 = alkyl or aryl; R9 and R10 = independently selected H, alkyl, aryl or halo; X = halo; V = O or S; R11 and R12 = independently selected H, alkyl, aryl or halo; Y = halo; and W = O or S). Chemiluminescent compns. incorporating the compds. are also described, as is their use in chemiluminescence anal. methods (e.g., immunoassays (no data)).

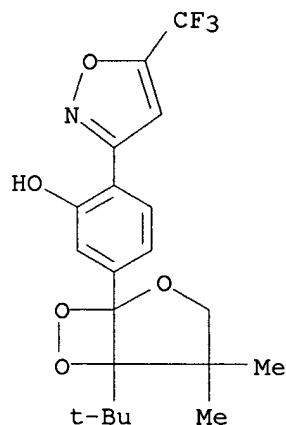
IT **457898-58-7P 457898-62-3P**

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)

(1,2-dioxetane derivs. and their use as chemiluminescent reagents and luminescence methods using them)

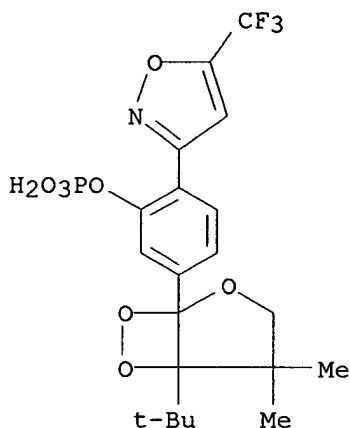
RN 457898-58-7 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]- (9CI)
(CA INDEX NAME)



RN 457898-62-3 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]-, dihydrogen phosphate (ester), disodium salt (9CI) (CA INDEX NAME)



● 2 Na

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> fil beilstein

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

15.72

513.17

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-2.19

-2.19

FILE 'BEILSTEIN' ENTERED AT 11:26:08 ON 03 JUN 2005

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FILE RELOADED ON OCTOBER 20, 2002

FILE LAST UPDATED ON APRIL 21, 2005

FILE COVERS 1771 TO 2004.

*** FILE CONTAINS 9,218,366 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *

* FOR PRICE INFORMATION SEE HELP COST *

NEW

- * PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.
- * NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.

=> s L7

SAMPLE SEARCH INITIATED 11:26:18 FILE 'BEILSTEIN'
SAMPLE SCREEN SEARCH COMPLETED - 20 TO ITERATE

100.0% PROCESSED 20 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.03

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 132 TO 668
PROJECTED ANSWERS: 0 TO 0

L11 0 SEA SSS SAM L7

=> fil casreact

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.06	513.23
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.19

FILE 'CASREACT' ENTERED AT 11:26:37 ON 03 JUN 2005
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FILE CONTENT:1840 - 29 May 2005 VOL 142 ISS 22

New CAS Information Use Policies, enter HELP USAGETERMS for details.

*
* CASREACT now has more than 9.2 million reactions *
*

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s L7

SAMPLE SEARCH INITIATED 11:26:41 FILE 'CASREACT'
SCREENING COMPLETE - 60 REACTIONS TO VERIFY FROM 5 DOCUMENTS

100.0% DONE 60 VERIFIED 0 HIT RXNS 0 DOCS

Connecting via Winsock to STN

10/09/47 6/3/05

Welcome to STN International! Enter x:x

LOGINID: ~~XXXXXXXXXX~~

Structure Search

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

3 hits CAPLUS
copying apps
Tefrahalin letter
this app

* * * * * Welcome to STN International

* * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online
NEWS 17 APR 25 Patent searching, including current-awareness alerts (SDIs),
based on application date in CA/CAPLUS and USPATFULL/USPAT2
may be affected by a change in filing date for U.S.
applications.
NEWS 18 APR 28 Improved searching of U.S. Patent Classifications for
U.S. patent records in CA/CAPLUS
NEWS 19 MAY 23 GBFULL enhanced with patent drawing images
NEWS 20 MAY 23 REGISTRY has been enhanced with source information from
CHEMCATS
NEWS 21 MAY 26 STN User Update to be held June 6 and June 7 at the SLA 2005
Annual Conference

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 11:33:50 ON 03 JUN 2005

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 11:33:58 ON 03 JUN 2005

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

DICTIONARY FILE UPDATES: 2 JUN 2005 HIGHEST RN 851586-61-3

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

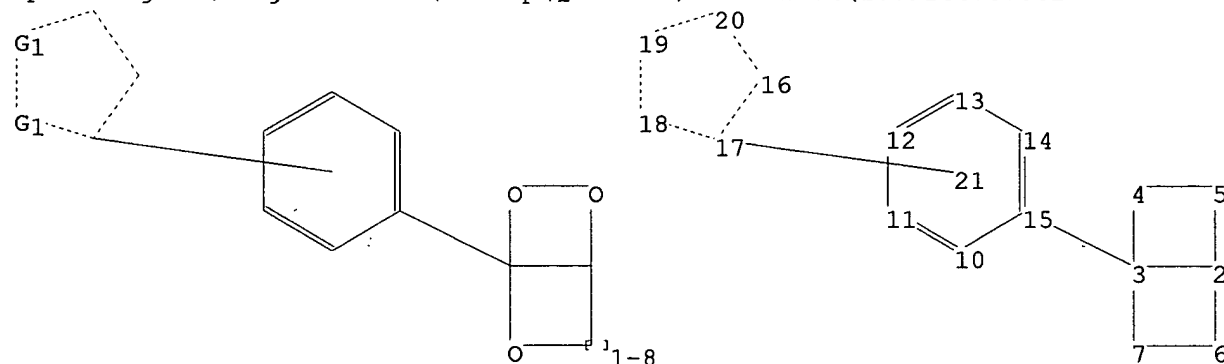
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\New Folder\10091447c.str



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ring nodes :
2  3  4  5  6  7  10  11  12  13  14  15  16  17  18  19  20
chain bonds :
3-15
ring bonds :
2-3  2-5  2-6  3-4  3-7  4-5  6-7  10-11  10-15  11-12  12-13  13-14  14-15  16-17
16-20  17-18  18-19  19-20
exact/norm bonds :
2-3  2-5  2-6  3-4  3-7  3-15  4-5  6-7  16-17  16-20  17-18  18-19  19-20
normalized bonds :
10-11  10-15  11-12  12-13  13-14  14-15

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G1:O,S,N

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Match level :
2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 10:Atom 11:Atom 12:Atom 13:Atom
14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:CLASS

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L1 STRUCTURE UPLOADED

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=> d
L1 HAS NO ANSWERS
L1 STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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Structure attributes must be viewed using STN Express query preparation.

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=> s L1
SAMPLE SEARCH INITIATED 11:34:19 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 6 TO ITERATE

100.0% PROCESSED 6 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

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FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH **COMPLETE**
PROJECTED ITERATIONS: 6 TO 266
PROJECTED ANSWERS: 1 TO 80

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L2 1 SEA SSS SAM L1

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FULL SEARCH INITIATED 11:34:24 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 109 TO ITERATE

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100.0% PROCESSED 109 ITERATIONS 6 ANSWERS
SEARCH TIME: 00.00.01

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L3 6 SEA SSS FUL L1

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=> fil caplus
COST IN U.S. DOLLARS          SINCE FILE          TOTAL
                                ENTRY          SESSION
FULL ESTIMATED COST          161.33          161.54

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FILE 'CAPLUS' ENTERED AT 11:34:29 ON 03 JUN 2005
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FILE COVERS 1907 - 3 Jun 2005 VOL 142 ISS 24
FILE LAST UPDATED: 2 Jun 2005 (20050602/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s L3
L4 3 L3
=> d ibib abs hitstr

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:717202 CAPLUS
DOCUMENT NUMBER: 139:230758
TITLE: 1,2-Dioxetane derivatives and chemiluminescent reagents employing them
INVENTOR(S): Matsumoto, Masakatsu; Watanabe, Nobuko; Yamada, Masashi
PATENT ASSIGNEE(S): Tosoh Corporation, Japan
SOURCE: Eur. Pat. Appl., 32 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

co-pending apps

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342724	A1	20030910	EP 2003-4897	20030306
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004002300	A2	20040108	JP 2003-16454	20030124
US 2003207329	A1	20031106	US 2003-382853	20030307
US 6747160	B2	20040608		
US 2004176611	A1	20040909	US 2004-798338	20040312
US 6844453	B2	20050118		
PRIORITY APPLN. INFO.:			JP 2002-64040	A 20020308
			JP 2002-88380	A 20020327
			US 2003-382853	A3 20030307
OTHER SOURCE(S):	MARPAT 139:230758			
GI				

=> d ibib abs hitstr 2-3

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:862396 CAPLUS

DOCUMENT NUMBER: 138:255129

TITLE: Synthesis of bicyclic dioxetanes bearing a 3-hydroxy-4-isoxazolyphenyl moiety: new CIEEL-active dioxetanes emitting light with remarkable high-efficiency in aqueous medium

AUTHOR(S): Matsumoto, Masakatsu; Sakuma, Toshimitsu; Watanabe, Nobuko

CORPORATE SOURCE: Department of Materials Science, Kanagawa University, Tsuchiya, Hiratsuka, Kanagawa, 259-1205, Japan

SOURCE: Tetrahedron Letters (2002), 43(49), 8955-8958 ✓

CODEN: TELEAY; ISSN: 0040-4039

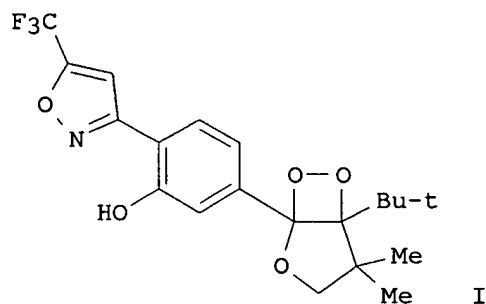
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:255129

GI



AB Bicyclic dioxetanes bearing a 3-hydroxy-4-isoxazolyphenyl moiety were synthesized. All these dioxetanes underwent base-induced CIEEL-decay to afford light with high efficiency in an NaOH/H₂O system as well as in a TBAF (tetrabutylammonium fluoride)/acetonitrile system. Among them, a dioxetane bearing a 3-hydroxy-4-[5-(trifluoromethyl)isoxazol-3-yl]phenyl moiety (I) emitted light in the aqueous system with the highest efficiency which parallels that attained in an aprotic solvent system. Fluorescence study and the AM1 calcns. for I and the parent CIEEL-active dioxetanes suggested that one important factor affecting chemiluminescence efficiency in an aqueous system should be the hydrogen-bonding at the carbonyl oxygen site of an oxyanion of hydroxyarene-carboxylate as the emitter produced by the CIEEL-decay.

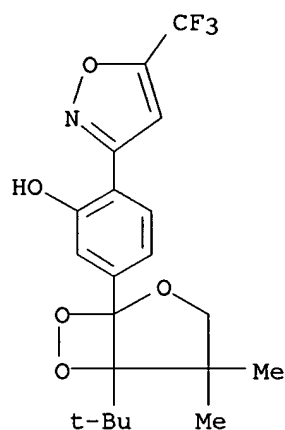
IT 457898-58-7P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and AM1 calcns. of CIEEL-active bicyclic dioxetanes bearing a hydroxyisoxazolyphenyl moiety)

RN 457898-58-7 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]- (9CI)
(CA INDEX NAME)

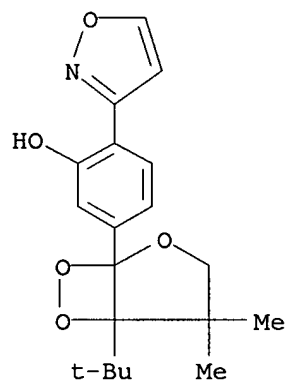


IT 502423-49-6P 502423-50-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of CIEEL-active bicyclic dioxetanes bearing a
hydroxyisoxazolylphenyl moiety)

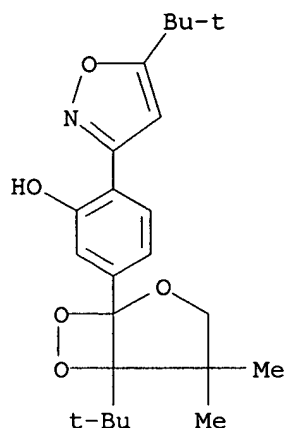
RN 502423-49-6 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-
trioxabicyclo[3.2.0]hept-1-yl]-2-(3-isoxazolyl)- (9CI) (CA INDEX NAME)



RN 502423-50-9 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-
trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(1,1-dimethylethyl)-3-isoxazolyl]-
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:693160 CAPLUS

DOCUMENT NUMBER: 137:232640

TITLE: 1,2-dioxetane derivatives and their use as chemiluminescent reagents, luminescence methods and measuring methods

INVENTOR(S): Matsumoto, Masakatsu; Watanabe, Nobuko; Yamada, Masashi

PATENT ASSIGNEE(S): Tosoh Corporation, Japan

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

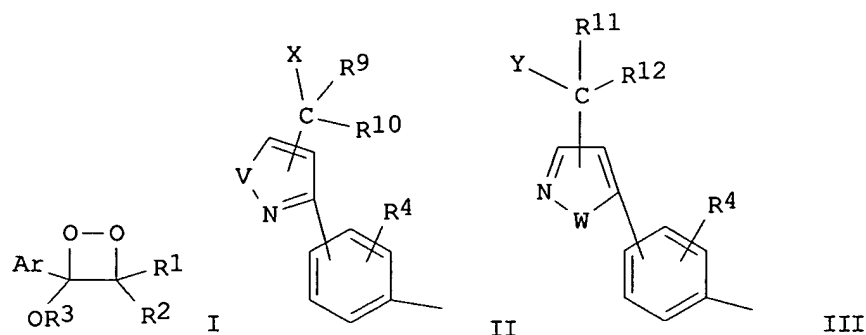
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1238976	A1	20020911	EP 2002-5225	20020307
EP 1238976	B1	20031008		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002338576	A2	20021127	JP 2002-57606	20020304
US 2002132365	A1	20020919	US 2002-91447	20020307
PRIORITY APPLN. INFO.:			JP 2001-65347	A 20010308
OTHER SOURCE(S):	MARPAT 137:232640			
GI				

this app.



AB 1,2-Dioxetane derivs. are described by the general formula I (R1 and R2 = independently selected H, alkyl or aryl, or R1 and R2 may together form a cyclic or polycyclic organic ring group spiro-bonded to the dioxetane ring; R3 = alkyl or aryl, or R3 and R1 or R2 may together form a condensed ring containing the dioxetane ring and a heteroatom; Ar = II or III; R4 = OH, alkoxyl, aralkyloxy, -OSi(R5R6R7), phosphate, or -S(C:O)R8; R5, R6 and R7 = independently selected alkyl or aryl groups; R8 = alkyl or aryl; R9 and R10 = independently selected H, alkyl, aryl or halo; X = halo; V = O or S; R11 and R12 = independently selected H, alkyl, aryl or halo; Y = halo; and W = O or S). Chemiluminescent compns. incorporating the compds. are also described, as is their use in chemiluminescence anal. methods (e.g., immunoassays (no data)).

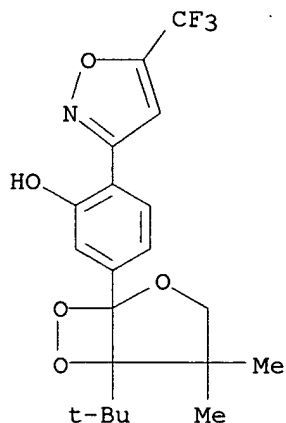
IT **457898-58-7P 457898-62-3P**

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)

(1,2-dioxetane derivs. and their use as chemiluminescent reagents and luminescence methods using them)

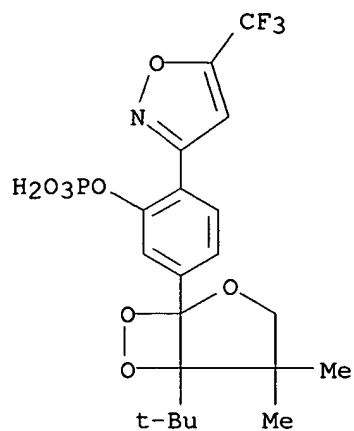
RN 457898-58-7 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]- (9CI)
(CA INDEX NAME)



RN 457898-62-3 CAPLUS

CN Phenol, 5-[5-(1,1-dimethylethyl)-4,4-dimethyl-2,6,7-trioxabicyclo[3.2.0]hept-1-yl]-2-[5-(trifluoromethyl)-3-isoxazolyl]-, dihydrogen phosphate (ester), disodium salt (9CI) (CA INDEX NAME)



●2 Na

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
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text search dioxetane + isoxazol

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE TOTAL

ENTRY SESSION

FULL ESTIMATED COST

0.21 0.21

FILE 'CAPLUS' ENTERED AT 16:40:58 ON 03 JUN 2005

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FILE LAST UPDATED: 2 Jun 2005 (20050602/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 1,2-dioxetane?

8285276 1

8394030 2

1492 DIOXETANE?

L1 815 1,2-DIOXETANE?

(1(W)2(W)DIOXETANE?)

=> s isooxazol? or 1,2-oxazol?

237 ISOOXAZOL?

8285276 1

8394030 2

38674 OXAZOL?

214 1,2-OXAZOL?

(1(W)2(W)OXAZOL?)

L2 451 ISOOXAZOL? OR 1,2-OXAZOL?

=> s L1 and L2

L3 0 L1 AND L2

=> d L1 200 ibib kwic

L1 ANSWER 200 OF 815 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:588973 CAPLUS

DOCUMENT NUMBER: 127:255161

TITLE: Branched quantum chain processes in the reaction of
1,2-dioxetane with
Eu(fod)₃ on a sorbent surface and in a solution

AUTHOR(S): Kazakov, V. P.; Voloshin, A. I.; Ostakhov, S. S.
 CORPORATE SOURCE: Inst. Org. Khim., Ufim. Nauchn.Tsentra, RAN, Ufa, Russia
 SOURCE: Doklady Akademii Nauk (1997), 354(1), 65-69
 CODEN: DAKNEQ; ISSN: 0869-5652
 PUBLISHER: MAIK Nauka
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian

TI Branched quantum chain processes in the reaction of **1,2-dioxetane** with Eu(fod)₃ on a sorbent surface and in a solution
 AB Chemiluminescent reaction of adamantylideneadamantane-**1,2-dioxetane** with tris(heptafluorodimethyloctanedione)europium [Eu(fod)₃] was studied in toluene solution and on a sorbent surface. The reaction proceeded via branched quantum chain involving Eu(fod)₃ in excited 5D₁ and 5D₀ states.
 IT Electronic energy transfer
 Electronic energy transfer
 Luminescence, chemiluminescence
 (chain processes in chemiluminescent reaction of adamantylideneadamantane-**1,2-dioxetane** catalyzed with tris(heptafluorodimethyloctanedione)europium)
 IT Reaction mechanism
 (chain; chain processes in chemiluminescent reaction of adamantylideneadamantane-**1,2-dioxetane** catalyzed with tris(heptafluorodimethyloctanedione)europium)
 IT 17631-68-4
 RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (chain processes in chemiluminescent reaction of adamantylideneadamantane-**1,2-dioxetane** catalyzed with tris(heptafluorodimethyloctanedione)europium)
 IT 35544-39-9, Adamantylideneadamantane-**1,2-dioxetane**
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (chain processes in chemiluminescent reaction of adamantylideneadamantane-**1,2-dioxetane** catalyzed with tris(heptafluorodimethyloctanedione)europium)

=> s dioxetan?

L4 1582 DIOXETAN?

=> s isozazole or isooxazole or 2(3a)oxazole

7 ISOZAZOLE

1 ISOZAZOLES

8 ISOZAZOLE

(ISOZAZOLE OR ISOZAZOLES)

65 ISOOXAZOLE

17 ISOOXAZOLES

79 ISOOXAZOLE

(ISOOXAZOLE OR ISOOXAZOLES)

8394030 2

6621 OXAZOLE

2147 OXAZOLES

7482 OXAZOLE

(OXAZOLE OR OXAZOLES)

2171 2(3A)OXAZOLE

L5 2258 ISOZAZOLE OR ISOOXAZOLE OR 2(3A)OXAZOLE

=> s isoxazole or isooxazole or 2(3a)oxazole

6458 ISOXAZOLE

2258 ISOXAZOLES

7196 ISOXAZOLE
 (ISOXAZOLE OR ISOXAZOLES)
 65 ISOOXAZOLE
 17 ISOOXAZOLES
 79 ISOOXAZOLE
 (ISOOXAZOLE OR ISOOXAZOLES)
 8394030 2
 6621 OXAZOLE
 2147 OXAZOLES
 7482 OXAZOLE
 (OXAZOLE OR OXAZOLES)
 2171 2(3A)OXAZOLE
 L6 9335 ISOXAZOLE OR ISOOXAZOLE OR 2(3A)OXAZOLE

=> s L4 and L6

L7 0 L4 AND L6

=> s isoxazol? or isooxazol? or 2(3a)oxazol?

17808 ISOXAZOL?
 237 ISOOXAZOL?
 8394030 2
 38674 OXAZOL?
 19713 2(3A)OXAZOL?
 L8 37038 ISOXAZOL? OR ISOOXAZOL? OR 2(3A)OXAZOL?

=> s L4 and L8

L9 10 L4 AND L8

=> d ibib abs 1-10.

L9 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:78081 CAPLUS

DOCUMENT NUMBER: 142:151541

TITLE: Sequential generation of multiple chemiluminescent signals on solid supports

INVENTOR(S): Voyta, John C.; Smith, Robert M.; Schroth, Gary P.; Sparks, Alison L.; Edwards, Brooks N.; Gonzalez, Carolyn

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005019778	A1	20050127	US 2003-620332	20030717
WO 2005007874	A2	20050127	WO 2004-US23081	20040719
WO 2005007874	A3	20050331		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.:

US 2003-620332

A 20030717

AB Chemiluminescent assays to determine the presence and/or amount of one or more labeled analytes in a sample are described wherein a solid support is contacted sequentially with first and second chemiluminescent substrates each of which are capable of being activated by an enzyme and the resulting chemiluminescent signals are detected. A plurality of probes are disposed on a surface layer of the solid support in a plurality of discrete areas. Some of the probes are bound to a conjugate of the first enzyme and some of the probes are bound to a conjugate of the second enzyme. The assay can be used to compare biol. samples (e.g., mRNA populations from different cells) on the same support surface. Alternatively, one of the chemiluminescent signals generated can be used as a control signal for normalizing the chemiluminescent assay data.

L9 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:922813 CAPLUS
DOCUMENT NUMBER: 140:110935
TITLE: Stereochemical Features of the Physical and Chemical Interactions of Singlet Oxygen with Enecarbamates
AUTHOR(S): Poon, Thomas; Turro, Nicholas J.; Chapman, Jessica; Lakshminarasimhan, P.; Lei, Xuegong; Jockusch, Steffen; Franz, Roberto; Washington, Ilyas; Adam, Waldemar; Bosio, Sara G.
CORPORATE SOURCE: Department of Chemistry and Department of Chemical Engineering, Columbia University, New York, NY, 10027, USA
SOURCE: Organic Letters (2003), 5(26), 4951-4953
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:110935

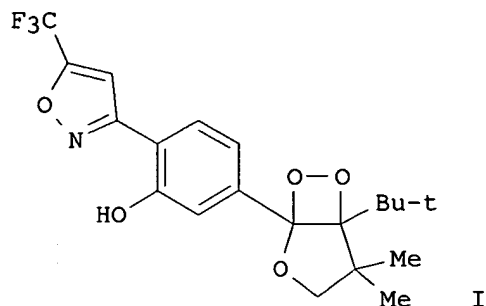
AB Oxazolidinone-substituted enecarbamates represent a mechanistically rich system for the study of stereoelectronic, steric, and conformational effects on stereoselectivity and mode selectivity in 102 [2 + 2] and ene reactions. Photooxygenation of these enecarbamates with 102 leads to diastereomerically pure **dioxetanes** that decompose to yield an oxazolidinone carbaldehyde and one of the two enantiomers of methyldeoxybenzoin in enantiomeric excess. Stereoselectivity originates at the allylic stereocenter, a result supported by quenching studies, computational anal., and deuterium solvent isotope effects.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:862396 CAPLUS
DOCUMENT NUMBER: 138:255129
TITLE: Synthesis of bicyclic **dioxetanes** bearing a 3-hydroxy-4-**isoxazolyphenyl** moiety: new CIEEL-active **dioxetanes** emitting light with remarkable high-efficiency in aqueous medium
AUTHOR(S): Matsumoto, Masakatsu; Sakuma, Toshimitsu; Watanabe, Nobuko
CORPORATE SOURCE: Department of Materials Science, Kanagawa University, Tsuchiya, Hiratsuka, Kanagawa, 259-1205, Japan
SOURCE: Tetrahedron Letters (2002), 43(49), 8955-8958
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:255129

GI



AB Bicyclic **dioxetanes** bearing a 3-hydroxy-4-**isoxazolylphenyl** moiety were synthesized. All these **dioxetanes** underwent base-induced CIEEL-decay to afford light with high efficiency in an NaOH/H₂O system as well as in a TBAF (tetrabutylammonium fluoride)/acetonitrile system. Among them, a **dioxetane** bearing a 3-hydroxy-4-[5-(trifluoromethyl)**isoxazol-3-yl**]phenyl moiety (I) emitted light in the aqueous system with the highest efficiency which parallels that attained in an aprotic solvent system. Fluorescence study and the AM1 calcns. for I and the parent CIEEL-active **dioxetanes** suggested that one important factor affecting chemiluminescence efficiency in an aqueous system should be the hydrogen-bonding at the carbonyl oxygen site of an oxyanion of hydroxyarene-carboxylate as the emitter produced by the CIEEL-decay.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:511737 CAPLUS

DOCUMENT NUMBER: 137:216900

TITLE: Highly Diastereoselective **Dioxetane** Formation in the Photooxygenation of Enecarbamates with an Oxazolidinone Chiral Auxiliary: Steric Control in the [2 + 2] Cycloaddition of Singlet Oxygen through Conformational Alignment

AUTHOR(S): Adam, Waldemar; Bosio, Sara G.; Turro, Nicholas J.

CORPORATE SOURCE: Institut fuer Organische Chemie, Universitaet Wuerzburg, Wuerzburg, D-97074, Germany

SOURCE: Journal of the American Chemical Society (2002), 124(30), 8814-8815

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:216900

AB The photooxygenation of oxazolidinone-substituted enecarbamates leads to diastereomerically pure **dioxetanes**. The high diastereoselectivity is rationalized in terms of effective π -facial control achieved by shielding one side of the double bond with the chiral auxiliary. The absolute configuration of the **dioxetanes** is assigned by derivatization to diols.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:389792 CAPLUS

DOCUMENT NUMBER: 133:150167

TITLE: Rearrangement Pathways of Arylperoxy Radicals. 2. Five-Membered Heterocycles

AUTHOR(S): Fadden, Michael J.; Hadad, Christopher M.

CORPORATE SOURCE: Department of Chemistry, The Ohio State University,
Columbus, OH, 43210, USA
SOURCE: Journal of Physical Chemistry A (2000), 104(26),
6324-6331
CODEN: JPCAFH; ISSN: 1089-5639
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The potential energy surfaces for the reaction of furanyl and oxazolyl radicals with O₂ have been examined using the B3LYP method. The initial production of the arylperoxy radical followed by either simple decomposition or rearrangement to yield several intermediates (aryloxy, dioxiranyl, or **dioxetanyl** radicals) has been explored. Transition state structures for most of the steps are presented as well as relative free energies over a range of temps. from 298 to 2000 K. The energetics of the analogous intermediates for the reaction of O₂ and other five-membered heterocyclic radicals derived from pyrrole and thiophene are also provided. The loss of an O atom is generally the most accessible and energetically favored pathway of decomposition at all temps. Dioxiranyl formation is favored over O₂ loss at temps. ≤500 K and favored in the same temperature range over O atom loss in several cases. **Dioxetanyl** formation incurs the greatest barrier to formation, and direct routes are not available in every mol. surveyed. However, in some cases the **dioxetane** radicals transform rapidly into very stable species.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:109624 CAPLUS

DOCUMENT NUMBER: 132:308271

TITLE: Photooxidative cleavage of **oxazoline-2-thione** in protic and aprotic solvents

AUTHOR(S): Singh, Indra Sen

CORPORATE SOURCE: Chemical Engineering Department, School of Technology,
Copperbelt University, Kitwe, Zambia

SOURCE: Bulletin of the Chemical Society of Ethiopia (1999),
13(2), 127-133

CODEN: BCETE6; ISSN: 1011-3924

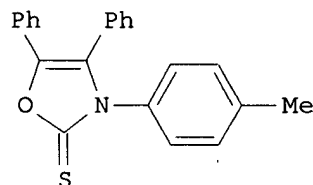
PUBLISHER: Chemical Society of Ethiopia

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 132:308271

GI



I

AB The photolysis of 4,5-diphenyl-3-(4-methylphenyl)-4-oxazoline-2-thione (I) in benzene or cyclohexane in the presence of singlet oxygen, using a Pyrex filtered 450 W Hanovia lamp, afforded benzil, N-(4-methylphenyl)benzamide, and N,N-dibenzoyl-4-methylaniline. When the same reaction was performed in protic solvents, the formation of benzil, N-(4-methylphenyl)benzamide, N,N-dibenzoyl-4-methylaniline, and benzoic acid was observed. The products were characterized by spectral data and

comparison (undepressed m.ps. and identical IR spectra) with authentic samples. Oxazolines are a widely used class of compds., and therefore it would be relevant to study the effect of UV light on such compds. under different conditions. The present study derives an interesting route for the photooxidative fragmentation of the 4-oxazoline-2-thione ring system. It involves a **dioxetane** derivative, which, after cleavage, gives two radicals, which finally give the above products. The yield of N-(4-methylphenyl)benzamide is increased by protic solvents, which gives strong support to the proposed mechanism.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:546523 CAPLUS
DOCUMENT NUMBER: 125:269847
TITLE: Enhancement of chemiluminescent assays
INVENTOR(S): Bronstein, Irena Y.; Edwards, Brooks; Voyta, John C.
PATENT ASSIGNEE(S): Tropix, Inc., USA
SOURCE: U.S., 21 pp., Cont.-in-part of U.S. Ser. No. 959,531.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 17
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5547836	A	19960820	US 1993-31471	19930315
US 5112960	A	19920512	US 1990-574786	19900830
JP 04124185	A2	19920424	JP 1990-239764	19900910
JP 11021285	A2	19990126	JP 1996-86324	19910830
US 5330900	A	19940719	US 1991-806928	19911212
ES 2131529	T3	19990801	ES 1992-915721	19920305
US 5639907	A	19970617	US 1992-959531	19921013
CA 2157917	AA	19940929	CA 1994-2157917	19940315
WO 9421821	A1	19940929	WO 1994-US2549	19940315
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9464449	A1	19941011	AU 1994-64449	19940315
EP 689611	A1	19960103	EP 1994-912204	19940315
EP 689611	B1	20020130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08507694	T2	19960820	JP 1994-521100	19940315
JP 3632856	B2	20050323		
EP 1120652	A1	20010801	EP 2001-102819	19940315
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 212722	E	20020215	AT 1994-912204	19940315
US 5543295	A	19960806	US 1994-233085	19940425
US 5679802	A	19971021	US 1995-433996	19950504
US 5654154	A	19970805	US 1996-588260	19960118
US 5831102	A	19981103	US 1996-598353	19960208
US 5994073	A	19991130	US 1997-850009	19970501
US 5856522	A	19990105	US 1997-882330	19970625
PRIORITY APPLN. INFO.:			US 1990-574786	A3 19900830
			US 1991-806928	A2 19911212
			US 1992-959531	A2 19921013
			US 1989-367772	B3 19850515
			US 1986-889823	A1 19860724
			US 1987-140197	B2 19871231
			US 1990-559152	A2 19900725

JP 1991-518245	A3 19910830
EP 1992-915721	A 19920305
US 1993-31471	A 19930315
EP 1994-912204	A3 19940315
WO 1994-US2549	W 19940315
US 1994-233085	A1 19940425
US 1995-433996	A1 19950504
US 1996-588260	A1 19960118

OTHER SOURCE(S): MARPAT 125:269847

AB Chemiluminescent bioassays for the detection or quantitation of an analyte in a sample use 1,2-dioxetanes as substrates for the enzyme of an enzyme complex that binds to the analyte. The chemiluminescence obtained from the decomposition of the dioxetane triggered by the enzyme through the formation of the corresponding 1,2-dioxetane oxyanion of the enzyme complex is enhanced by the addition of TBQ [poly(vinylbenzyltributylammonium chloride)] as an enhancement agent. Other polymeric quaternary onium salts can be used as enhancement agents in conjunction with enhancement additives which improve the ability of the enhancement agent to form hydrophobic regions in the aqueous sample, in which regions the 1,2-dioxetane oxyanion and its chemiluminescent decomposition products can be sequestered. A kit for performing such assays is also provided.

L9 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:169405 CAPLUS

DOCUMENT NUMBER: 122:260545

TITLE: Additives for enhancing chemiluminescent assays using 1,2-dioxetanes as substrates

INVENTOR(S): Bronstein, Irena Y.; Edwards, Brooks; Voyta, John C.

PATENT ASSIGNEE(S): Tropix, Inc., USA

SOURCE: PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 17

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9421821	A1	19940929	WO 1994-US2549	19940315
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
ES 2131529	T3	19990801	ES 1992-915721	19920305
US 5547836	A	19960820	US 1993-31471	19930315
CA 2157917	AA	19940929	CA 1994-2157917	19940315
AU 9464449	A1	19941011	AU 1994-64449	19940315
EP 689611	A1	19960103	EP 1994-912204	19940315
EP 689611	B1	20020130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08507694	T2	19960820	JP 1994-521100	19940315
JP 3632856	B2	20050323		
AT 212722	E	20020215	AT 1994-912204	19940315
US 5856522	A	19990105	US 1997-882330	19970625
PRIORITY APPLN. INFO.:			US 1993-31471	A 19930315
			US 1990-574786	A3 19900830
			US 1991-806928	A2 19911212
			EP 1992-915721	A 19920305
			US 1992-959531	A2 19921013
			WO 1994-US2549	W 19940315
			US 1995-433996	A1 19950504

OTHER SOURCE(S): MARPAT 122:260545

AB Disclosed is additives for enhancing chemiluminescent bioassays for the presence or concentration of an analyte in a sample use 1,2-dioxetanes as substrates for the enzyme of an enzyme complex that bind to the analyte. The additives include surfactant (e.g. Tween 20), solvent (e.g. isopropanol, polyvinyl alc.), and water-soluble polymers (e.g. polymeric quaternary onium salts). The chemiluminescence obtained from the decomposition of the **dioxetane** triggered by the enzyme through the formation of the corresponding 1,2-dioxetane oxyanion of the enzyme complex is enhanced by the addition of poly(vinylbenzyltributylammonium chloride) as an enhancement agent. Other polymeric quaternary onium salts can be used as enhancement agents in conjunction with enhancement additives which improve the ability of the enhancement agent to form hydrophobic regions in the aqueous sample, in which regions the 1,2-dioxetane oxyanion and its chemiluminescent decomposition products can be sequestered. A kit for performing such assays is also provided.

L9 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1981:173921 CAPLUS

DOCUMENT NUMBER: 94:173921

TITLE: Photochemical transformations of 4,5-diaryl-4-oxazolin-2-one protecting groups

AUTHOR(S): Guziec, Frank S., Jr.; Tewes, Edwin T.

CORPORATE SOURCE: Dep. Chem., Tufts Univ., Medford, MA, 02155, USA

SOURCE: Journal of Heterocyclic Chemistry (1980), 17(8), 1807-8

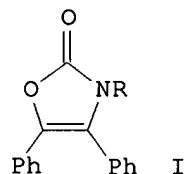
CODEN: JHTCAD; ISSN: 0022-152X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 94:173921

GI



AB UV irradiation in air of oxazolinones I (R = PhCH₂CH₂ or CH₂CO₂H) in MeOH leads to photooxidn. of the protecting group, affording the PhCONHR and PhCO₂Me. Reduction of the intermediate **dioxetane** leads to complete removal of the protecting group. A mechanism for this photolysis is proposed and evidence in support of this mechanism is reported.

L9 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1976:446476 CAPLUS

DOCUMENT NUMBER: 85:46476

TITLE: Photochemistry of heterocyclic compounds. VI. The photochemical reaction of 3,4,5-triphenyl-4-oxazolin-2-one

AUTHOR(S): Tsuge, Otohiko; Oe, Koji; Ueyama, Yasuo

CORPORATE SOURCE: Res. Inst. Ind. Sci., Kyushu Univ., Fukuoka, Japan

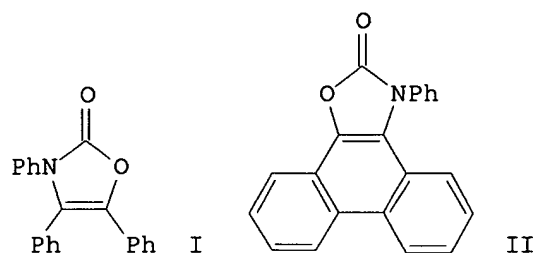
SOURCE: Chemistry Letters (1976), (5), 425-8

CODEN: CMLTAG; ISSN: 0366-7022

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Irradiation of 3,4,5-triphenyl-4-oxazolin-2-one (I) in benzene under N with or without iodine gave PhCONHPh and phenanthroxazolinone II whereas in the presence of O I was photochem. converted to PhCONHPh, PhCO₂H, and benzamidobenzophenones, presumably via an initial attack of singlet O to I followed by ring cleavage of the resulting **dioxetane** to give PhNBz₂, which on irradiation gave the final products.

=> exp bronstein i/au

E1	1	BRONSTEIN HINDY EVA/AU
E2	2	BRONSTEIN HOWARD D/AU
E3	23 -->	BRONSTEIN I/AU
E4	1	BRONSTEIN I A/AU
E5	7	BRONSTEIN I B/AU
E6	2	BRONSTEIN I P/AU
E7	4	BRONSTEIN IGOR/AU
E8	15	BRONSTEIN IGOR B/AU
E9	61	BRONSTEIN IRENA/AU
E10	16	BRONSTEIN IRENA Y/AU
E11	1	BRONSTEIN IRENE/AU
E12	12	BRONSTEIN J/AU

=> s e9-e11

	61	"BRONSTEIN IRENA"/AU
	16	"BRONSTEIN IRENA Y"/AU
	1	"BRONSTEIN IRENE"/AU
L10	78	("BRONSTEIN IRENA"/AU OR "BRONSTEIN IRENA Y"/AU OR "BRONSTEIN IRENE"/AU)

=> s L10 and dioxetan?

	1582	DIOXETAN?
L11	59	L10 AND DIOXETAN?

=> s L11 and ?oxazol?

	83817	?OXAZOL?
L12	5	L11 AND ?OXAZOL?

=> d L12 1-5 ibib abs

L12 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1996:546523 CAPLUS
DOCUMENT NUMBER:	125:269847
TITLE:	Enhancement of chemiluminescent assays
INVENTOR(S):	Bronstein, Irena Y. ; Edwards, Brooks; Voyta, John C.
PATENT ASSIGNEE(S):	Tropix, Inc., USA
SOURCE:	U.S., 21 pp., Cont.-in-part of U.S. Ser. No. 959,531. CODEN: USXXAM
DOCUMENT TYPE:	Patent
LANGUAGE:	English

FAMILY ACC. NUM. COUNT: 17
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5547836	A	19960820	US 1993-31471	19930315
US 5112960	A	19920512	US 1990-574786	19900830
JP 04124185	A2	19920424	JP 1990-239764	19900910
JP 11021285	A2	19990126	JP 1996-86324	19910830
US 5330900	A	19940719	US 1991-806928	19911212
ES 2131529	T3	19990801	ES 1992-915721	19920305
US 5639907	A	19970617	US 1992-959531	19921013
CA 2157917	AA	19940929	CA 1994-2157917	19940315
WO 9421821	A1	19940929	WO 1994-US2549	19940315
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9464449	A1	19941011	AU 1994-64449	19940315
EP 689611	A1	19960103	EP 1994-912204	19940315
EP 689611	B1	20020130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08507694	T2	19960820	JP 1994-521100	19940315
JP 3632856	B2	20050323		
EP 1120652	A1	20010801	EP 2001-102819	19940315
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 212722	E	20020215	AT 1994-912204	19940315
US 5543295	A	19960806	US 1994-233085	19940425
US 5679802	A	19971021	US 1995-433996	19950504
US 5654154	A	19970805	US 1996-588260	19960118
US 5831102	A	19981103	US 1996-598353	19960208
US 5994073	A	19991130	US 1997-850009	19970501
US 5856522	A	19990105	US 1997-882330	19970625
PRIORITY APPLN. INFO.:			US 1990-574786	A3 19900830
			US 1991-806928	A2 19911212
			US 1992-959531	A2 19921013
			US 1989-367772	B3 19850515
			US 1986-889823	A1 19860724
			US 1987-140197	B2 19871231
			US 1990-559152	A2 19900725
			JP 1991-518245	A3 19910830
			EP 1992-915721	A 19920305
			US 1993-31471	A 19930315
			EP 1994-912204	A3 19940315
			WO 1994-US2549	W 19940315
			US 1994-233085	A1 19940425
			US 1995-433996	A1 19950504
			US 1996-588260	A1 19960118

OTHER SOURCE(S): MARPAT 125:269847

AB Chemiluminescent bioassays for the detection or quantitation of an analyte in a sample use 1,2-dioxetanes as substrates for the enzyme of an enzyme complex that binds to the analyte. The chemiluminescence obtained from the decomposition of the dioxetane triggered by the enzyme through the formation of the corresponding 1,2-dioxetane oxyanion of the enzyme complex is enhanced by the addition of TBQ [poly(vinylbenzyltributylammonium chloride)] as an enhancement agent. Other polymeric quaternary onium salts can be used as enhancement agents in conjunction with enhancement additives which improve the ability of the enhancement agent to form hydrophobic regions in the aqueous sample, in which regions the 1,2-dioxetane oxyanion and its chemiluminescent decomposition products can be sequestered. A kit for performing such assays is also provided.

ACCESSION NUMBER: 1995:169405 CAPLUS
 DOCUMENT NUMBER: 122:260545
 TITLE: Additives for enhancing chemiluminescent assays using
 1,2-**dioxetanes** as substrates
 INVENTOR(S): **Bronstein, Irena Y.**; Edwards, Brooks; Voyta,
 John C.
 PATENT ASSIGNEE(S): Tropix, Inc., USA
 SOURCE: PCT Int. Appl., 61 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 17
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9421821	A1	19940929	WO 1994-US2549	19940315
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
ES 2131529	T3	19990801	ES 1992-915721	19920305
US 5547836	A	19960820	US 1993-31471	19930315
CA 2157917	AA	19940929	CA 1994-2157917	19940315
AU 9464449	A1	19941011	AU 1994-64449	19940315
EP 689611	A1	19960103	EP 1994-912204	19940315
EP 689611	B1	20020130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08507694	T2	19960820	JP 1994-521100	19940315
JP 3632856	B2	20050323		
AT 212722	E	20020215	AT 1994-912204	19940315
US 5856522	A	19990105	US 1997-882330	19970625
PRIORITY APPLN. INFO.:			US 1993-31471	A 19930315
			US 1990-574786	A3 19900830
			US 1991-806928	A2 19911212
			EP 1992-915721	A 19920305
			US 1992-959531	A2 19921013
			WO 1994-US2549	W 19940315
			US 1995-433996	A1 19950504

OTHER SOURCE(S): MARPAT 122:260545

AB Disclosed is additives for enhancing chemiluminescent bioassays for the presence or concentration of an analyte in a sample use 1,2-**dioxetanes** as substrates for the enzyme of an enzyme complex that bind to the analyte. The additives include surfactant (e.g. Tween 20), solvent (e.g. isopropanol, polyvinyl alc.), and water-soluble polymers (e.g. polymeric quaternary onium salts). The chemiluminescence obtained from the decomposition of the **dioxetane** triggered by the enzyme through the formation of the corresponding 1,2-**dioxetane** oxyanion of the enzyme complex is enhanced by the addition of poly(vinylbenzyltributylammonium chloride) as an enhancement agent. Other polymeric quaternary onium salts can be used as enhancement agents in conjunction with enhancement additives which improve the ability of the enhancement agent to form hydrophobic regions in the aqueous sample, in which regions the 1,2-**dioxetane** oxyanion and its chemiluminescent decomposition products can be sequestered. A kit for performing such assays is also provided.

ACCESSION NUMBER: 1992:18074 CAPLUS
 DOCUMENT NUMBER: 116:18074
 TITLE: Use of organic or fluorescent enhancers in

chemiluminescence assay using acid or alkaline phosphatase and **dioxetane** substrates

INVENTOR(S): **Bronstein, Irena**; Edwards, Brooks; Voyta, John C.

PATENT ASSIGNEE(S): Tropix, Inc., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

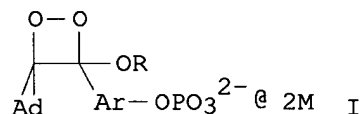
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03053897	A2	19910307	JP 1989-188682	19890720
JP 2984282	B2	19991129		
PRIORITY APPLN. INFO.:			JP 1989-188682	19890720
OTHER SOURCE(S):	MARPAT 116:18074			
GI				



AB A chemiluminescence assay uses acid phosphatase on alkaline phosphatase and **dioxetane** derivs. I (Ad = adamantyl; R = lower alkyl; M = cation; Ar = aromatic) in the presence of an enhancer such as polyvinylbenzyl(benzyltrimethylammonium)chloride (BDMQ). The assay can be easily measured since a high chemiluminescence d. is generated in the system. Thus, α -fetoprotein (AFP) in a sample was treated with alkaline phosphatase-anti-AFP Fab conjugate and incubated with an anti-AFP mouse IgG-coated polystyrene bead at room temperature for 20 min. The bead was washed, incubated with a substrate solution containing 3-(2'-spiroadamantane)-4-methoxy-4-(3''-phosphoryloxy)phenyl-1,2-**dioxetane** di-Na salt, BDMQ, MgCl₂, ZnCl₂ and pH 9.8 Tris buffer at room temperature for 20 min and the reaction mixture was counted with a luminometer for AFP determination. A marked enhancement was noted compared to controls (i.e. assay system containing no BDMQ).

L12 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:651641 CAPLUS

DOCUMENT NUMBER: 115:251641

TITLE: Composition and chemiluminescent assay using a chemiluminescent compound and a hydrosoluble activator

INVENTOR(S): Voyta, John C.; Brooks, Edwards; **Bronstein, Irena Y.**

PATENT ASSIGNEE(S): Tropix, Inc., USA

SOURCE: Fr. Demande, 44 pp.
CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2649205	A1	19910104	FR 1989-8844	19890630

FR 2649205 B1 19950217
PRIORITY APPLN. INFO.: FR 1989-8844 19890630

AB A chemiluminescent assay is carried out in the presence of a substance that is sufficiently hydrosol to activate the intensity of energy liberated by the decomposition of the chemiluminescent agent. An aqueous composition comprises the decomposable chemiluminescent compound and the hydrosol. substance. TSH was determined using monoclonal anti-TSH antibody-alkaline phosphatase, Na₂ 3-(2'-spiroadamantane)-4-methoxy-4-(3''-phosphoryloxy)phenyl-1,2-dioxetane, and bovine serum albumin as the activator substance. Samples containing the albumin had a much greater luminescent intensity over samples lacking the albumin.

L12 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:578856 CAPLUS
DOCUMENT NUMBER: 115:178856
TITLE: Chemiluminescence enhancement with macromolecules and quaternary ammonium polymers
INVENTOR(S): Voyta, John C.; Brooks, Edward; **Bronstein, Irene**
PATENT ASSIGNEE(S): Tropix, Inc., USA
SOURCE: Brit. UK Pat. Appl., 46 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2233451	A1	19910109	GB 1989-14749	19890627
GB 2233451	B2	19930915		
DE 3921609	A1	19910103	DE 1989-3921609	19890630
DE 3921609	C2	19981126		

PRIORITY APPLN. INFO.: GB 1989-14749 A 19890627

AB Water-soluble enhancer substances, generally macromol. in nature, for example globular proteins such as bovine serum albumin, and polymeric quaternary ammonium salts such as poly(vinylbenzyltrimethylammonium chloride), which have the ability to inhibit non-light-emitting pathways of fluorophores are disclosed as permitting the stabilization, and hence increasing the light intensity, of such light-emitting fluorophores in aqueous media as compared to the intensity of the light emitted by the same quantities of such fluorophores in aqueous media in the absence of the enhancer substances. The enhancers may optionally be used with an auxiliary fluorophore, e.g. fluorescein. The enhanced chemiluminescent substances are preferably 1,2-dioxetane derivs. In immunochem. determination of TSH, the chemiluminescence of 3-(2'-spiroadamantane)-4-methoxy-4-(3''-phosphoryloxy)phenyl-1,2-dioxetane Na₂ cleaved by alkaline phosphatase antibody conjugate, was enhanced by the addition of bovine serum albumin.

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	98.07	98.28
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-11.68	-11.68

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